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Standard & Poor's CORPORATE • RATINGS CRITERIA

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Dear Reader,

This volume updates the 1994 edition of Corporate Finance Criteria. There are several new chapters, covering our recently introduced Bank Loan Ratings, criteria for "notching" junior obligations, and the role of cyclicality in ratings. Naturally, the ratio medians have been brought up to date.

Standard & Poor's criteria publications represent our endeavor to convey the thought processes and methodologies employed in determining Standard & Poor's ratings. They describe both the quantitative and qualitative aspects of the analysis. We believe that our rating product has the most value if users appreciate all that has gone into producing the letter symbols.

Bear in mind, though, that a rating is, in the end, an opinion. The rating experience is as much an art as it is a science.

Solomon B. Samson

James 9

Chairman, Corporate Ratings Criteria Committee

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Utilities

The utilities rating methodology encompasses two basic components: business risk analysis and financial analysis. Evaluation of industry characteristics, the utility's position within that industry, its regulation, and its management provides the context for assessing a firm's financial condition.

Historical analysis is a tool for identifying strengths and weaknesses, and provides a starting point for evaluating financial condition. Business position assessment is the qualitative measure of a utility's fundamental creditworthiness. It focuses on the forces that will shape the utilities' future.

Utilities credit analysis factors Financial risk Business risk Markets and service area Earnings protection economy Capital structure Competitive position Cash flow adequacy Financial flexibility/capital Operations attraction Regulation Management Fuel, power, and water Asset concentration

The credit analysis of utilities is quickly evolving, as utilities are treated less as regulated monopolies and more as entities faced with a host of challengers in a competitive environment. Marketplace dynamics are supplanting the power of regulation, making it critically important to reduce costs and/or market new services in order to thwart competitors' inroads.

Markets and service area economy

Assessing service territory begins with the economic and demographic evaluation of the area in which the utility has its franchise. Strength of long-term demand for the product is examined from a macroeconomic perspective. This enables Standard & Poor's to evaluate the affordability of rates and the staying power of demand.

Standard & Poor's tries to discern any secular consumption trends and, more importantly, the reasons for them. Specific items examined include the size and growth rate of the market, strength of the franchise, historical and projected sales growth, income levels and trends in population, employment, and per capita income. A utility with a healthy economy and customer base—as illustrated by diverse employment opportunities, average or above-average wealth and income statistics, and low unemploy-

ment—will have a greater capacity to support its opera-

For electric and gas utilities, distribution by customer class is scrutinized to assess the depth and diversity of the utility's customer mix. For example, heavy industrial concentration is viewed cautiously, since a utility may have significant exposure to cyclical volatility. Alternatively, a large residential component yields a stable and more predictable revenue stream. The largest utility customers are identified to determine their importance to the bottom line and assess the risk of their loss and potential adverse effect on the utility's financial position. Credit concerns arise when individual customers represent more than 5% of revenues. The company or industry may play a significant role in the overall economic base of the service area. Moreover, large customers may turn to cogeneration or alternative power supplies to meet their energy needs, potentially leading to reduced cash flow for the utility (even in cases where a large customer pays discounted rates and is not a profitable account for the utility). Customer concentration is less significant for water and telecommunication utili-

Competitive position

As competitive pressures have intensified in the utilities industry, Standard & Poor's analysis has deepened to include a more thorough review of competitive position.

Electric utility competition

For electric utilities, competitive factors examined include: percentage of firm wholesale revenues that are most vulnerable to competition; industrial load concentration; exposure of key customers to alternative suppliers; commercial concentrations; rates for various customer classes; rate design and flexibility; production costs, both marginal and fixed; the regional capacity situation; and transmission constraints. A regional focus is evident, but high costs and rates relative to national averages are also of significant concern because of the potential for electricity substitutes over time.

Mounting competition in the electric utility industry derives from excess generating capacity, lower barriers to entering the electric generating business, and marginal costs that are below embedded costs. Standard & Poor's has already witnessed declining prices in wholesale markets, as de facto retail competition is already being seen in several parts of the country. Standard & Poor's believes that over the coming years more and more customers will want and demand lower prices. Initial concerns focus on the largest industrial loads, but other customer classes will be increasingly vulnerable. Competition will not necessar-

ily be driven by legislation. Other pressures will arise from global competition and improving technologies, whether it be the declining cost of incremental generation or advances in transmission capacity or substitute energy sources like the fuel cell. It is impossible to say precisely when wide-open retail competition will occur; this will be evolutionary. However, significantly greater competition in retail markets is inevitable.

Gas utility competition

Similarly, gas utilities are analyzed with regard to their competitive standing in the three major areas of demand: residential, commercial, and industrial. Although regulated as holders of monopoly power, natural gas utilities have for some time been actively competing for energy market share with fuel oil, electricity, coal, solar, wood, etc. The long-term staying power of market demand for natural gas cannot be taken for granted. In fact, as the electric utility industry restructures and reduces costs, electric power will become more cost competitive and threaten certain gas markets. In addition, independent gas marketers have made greater inroads behind the city gate and are competing for large gas users. Moreover, the recent trend by state regulators to unbundle utility services is creating opportunities for outsiders to market niche products. Disibutors still have the upper hand, but those who do not educe and control costs, and thus rates, could find competition even more difficult.

Natural gas pipelines are judged to carry a somewhat higher business risk than distribution companies because they face competition in every one of their markets. To the extent a pipeline serves utilities versus industrial end users. its stability is greater. Over the next five years, pipeline competition will heat up since many service contracts with customers are expiring. Most distributor or end-use customers are looking to reduce pipeline costs and are working to improve their load factor to do so. Thus, pipelines will likely find it difficult to recontract all capacity in coming years. Being the pipeline of choice is a function of attractive transportation rates, diversity and quality of services provided, and capacity available in each particular market. In all cases though, periodic discounting of rates to retain customers will occur and put pressure on profitability.

Water utility competition

As the last true utility monopoly, water utilities face very little competition and there is currently no challenge to the continuation of franchise areas. The only exceptions have been cases where investor-owned water companies have been subject to condemnation and municipalization because of poor service or political motivations. In that regard, Standard & Poor's pays close attention to costs and rates in relation to neighboring utilities and national averages. (In contrast, the privatization of public water facilities has begun, albeit at a slower pace than anticipated. This is occurring mostly in the form of operating contracts and public/private partnerships, and not in asset transfers. This trend should continue as cities look for ways to bal-

ance their tight budgets.) Also, water utilities are not fully immune to the forces of competition; in a few instances wholesale customers can access more than one supplier.

Telephone competition

The Telecommunications Act of 1996 accelerates the continuing challenge to the local exchange companies' (LECs) century-old monopoly in the local loop. Competitive access providers (CAPs), both facilities-based and resellers, are aggressively pursuing customers, generally targeting metropolitan areas, and promising lower rates and better service.

Most long-distance calls are still originated and terminated on the local telephone company network. To complete such a call, the long-distance provider (including AT&T. MCI. Sprint and a host of smaller interexchange carriers or "IXCs") must pay the local telephone company a steep "access" fee to compensate the local phone company for the use of its local network. CAPs, in contrast, build or lease facilities that directly connect customers to their long-distance carrier, bypassing the local telephone company and avoiding access fees, and thereby can offer lower long-distance rates. But the LECs are not standing still; they are combating the loss of business to CAPs by lowering access fees, thereby reducing the economic incentive for a high usage long-distance customer to use a CAP. LECs are attempting to make up for the loss of revenues from lower access fees by increasing basic local service rates (or at least not lowering them), since basic service is far less subject to competition. LECs are improving operating efficiency and marketing high margin, value-added new services. Additionally, in the wake of the Telecommunications Act, LECs will capture at least some of the inter-LATA long-distance market. As a result of these initiatives, LECs continue to rebuild themselves—from the traditional utility monopoly to leaner, more marketing oriented organizations.

While LECs, and indeed all segments of the telecommunications sector, face increasing competition, there are favorable industry factors that tend to offset heightened business risk and auger for overall ratings stability for most LECs. Importantly, telecommunications is a declining-cost business. With increased deployment of fiber optics, the cost of transport has fallen dramatically and digital switching hardware and software have yielded more capable, trouble-free and cost-efficient networks. As a result, the cost of network maintenance has dropped sharply, as illustrated by the ratio of employees per 10,000 access lines, an oft cited measurement of efficiency. Ratios as low as 25 employees per 10,000 lines are being seen, down from the typical 40 or more employees per 10,000 ratio of only a few years ago.

In addition, networks are far more capable. They are increasingly digitally switched and able to accommodate high-speed communications. The infrastructure needed to accommodate switched broadband services will be built into telephone networks over the next few years. These advanced networks will enable telephone companies to look to a greater variety of high-margin, value-added serv-

ices. In addition to those current services such as cali waiting or caller ID, the delivery of hundreds of broadcast and interactive video channels will be possible. While these services offer the potential of new revenue streams, they will simultaneously present a formidable challenge. LECs will be entering the new (to them) arena of multimedia entertainment and will have to develop expertise in marketing and entertainment programming acumen; such skills stand in sharp contrast to LECs' traditional strengths in engineering and customer service.

Operations

Standard & Poor's focuses on the nature of operations from the perspective of cost, reliability, and quality of service. Here, emphasis is placed on those areas that require management attention in terms of time or money and which, if unresolved, may lead to political, regulatory, or competitive problems.

Operations of electric utilities

For electrics, the status of utility plant investment is reviewed with regard to generating plant availability and utilization, and also for compliance with existing and contemplated environmental and other regulatory standards. The record of plant outages, equivalent availability, load actors, heat rates, and capacity factors are examined. Also important is efficiency, as defined by total megawatt hour per employee and customers per employee. Transmission interconnections are evaluated in terms of the number of utilities to which the utility in question has access, the cost structures and available generating capacity of these other utilities, and the price paid for wholesale power.

Because of mounting competition and the substantial escalation in decommissioning estimates, significant weight is given to the operation of nuclear facilities. Nuclear plants are becoming more vulnerable to high production costs that make their rates uneconomic. Significant asset concentration may expose the utility to poor performance, unscheduled outages or premature shutdowns, and large deferrals or regulatory assets that may need to be written off for the utility to remain competitive. Also, nuclear facilities tend to represent significant portions of their operators' generating capability and assets. The loss of a productive nuclear unit from both power supply and rate base can interrupt the revenue stream and create substantial additional costs for repairs and improvements and replacement power. The ability to keep these stations running smoothly and economically directly influences the ability to meet electric demand, the stability of revenues and costs, and, by extension, the ability to maintain adequate creditworthiness. Thus, economic operation, safe operation, and long-term operation are examined in depth. Specifically, emphasis is placed on operation and maintenance costs, busbar costs, fuel costs, refueling outages, forced outages, plant statistics, NRC evaluations, the potential need for repairs, operating licenses, decommissioning estimates and amounts held in external trusts, spent fuel storage capacity, and management's nuclear experience. In essence, favorable nuclear operations offer significant opportunities but, if a nuclear unit runs poorly or not at all, the attendant risks can be great.

Operations of gas utilities

For gas pipeline and distribution companies, the degree of plant utilization, the physical condition of the mains and lines, adequacy of storage to meet seasonal needs, "lost and unaccounted for" gas levels, and per-unit nongas operating and construction costs are important factors. Efficiency statistics such as load factor, operating costs per customer, and operating income per employee are also evaluated in comparison to other utilities and the industry as a whole.

Operations of water utilities

As a group, water utilities are continually upgrading their physical plant to satisfy regulations and to develop additional supply. Over the next decade, water systems will increasingly face the task of maintaining compliance, as drinking water regulations change and infrastructure ages. Given that the Safe Drinking Water Act was authorized in 1974, the first generation of treatment plants built to conform with these rules are almost 20 years old. Additionally, because the focus during this period was on satisfying environmental standards, deferred maintenance of distribution systems has been common, especially in older urban areas. The increasing cost of supplying treated water argues against the high level of unaccounted for water witnessed in the industry. Consequently, Standard & Poor's anticipates capital plans for rebuilding distribution lines and major renewal and replacement efforts aimed at treatment plants.

Operations of telephone companies

For telephone companies, cost-of-service analysis focuses on plant capability and measures of efficiency and quality of service. Plant capability is ascertained by looking at such parameters as percentage of digitally switched lines; fiber optic deployment, in particular in those portions of the plant key to network survival; and the degree of broadband capacity fiber and coaxial deployment and broadband switching capacity. Efficiency measures include operating margins, the ratio of employees per 10,000 access lines, and the extent of network and operations consolidation. Quality of service encompasses examination of quantitative measures, such as trouble reports and repeat service calls, as well as an assessment of qualitative factors, that may include service quality goals mandated by regulators.

Regulation

Regulatory rate-setting actions are reviewed on a caseby-case basis with regard to the potential effect on creditworthiness. Regulators' authorizing high rates of return is of little value unless the returns are earnable. Furthermore, allowing high returns based on noncash items does not benefit bondholders. Also, to be viewed positively, regulatory treatment should allow consistent performance from

period to period, given the importance of financial stability as a rating consideration.

The utility group meets frequently with commission and staff members, both at Standard & Poor's offices and at commission headquarters, demonstrating the importance Standard & Poor's places on the regulatory arena for credit quality evaluation. Input from these meetings and from review of rate orders and their impact weigh heavily in Standard & Poor's analysis.

Standard & Poor's does not "rate" regulatory commissions. State commissions typically regulate a number of diverse industries, and regulatory approaches to different types of companies often differ within a single regulatory jurisdiction. This makes it all but impossible to develop inclusive "ratings" for regulators.

Standard & Poor's evaluation of regulation also encompasses the administrative, judicial, and legislative processes involved in state and federal regulation. These can affect rate-setting activities and other aspects of the business, such as competitive entry, environmental and safety rules, facility siting, and securities sales.

As the utility industry faces an increasingly deregulated environment, alternatives to traditional rate-making are becoming more critical to the ability of utilities to effectively compete, maintain earnings power, and sustain reditor protection. Thus, Standard & Poor's focuses on whether regulators, both state and federal, will help or hinder utilities as they are exposed to greater competition. There is much that regulators can do, from allocating costs to more captive customers to allowing pricing flexibility—and sometimes just stepping out of the way.

Under traditional rate-making, rates and earnings are tied to the amount of invested capital and the cost of capital. This can sometimes reward companies more for justifying costs than for containing them. Moreover, most current regulatory policies do not permit utilities to be flexible when responding to competitive pressures of a deregulated market. Lack of flexible tariffs for electric utilities may lure large customers to wheel cheaper power from other sources.

In general, a regulatory jurisdiction is viewed favorably if it permits earning a return based on the ability to sustain rates at competitive levels. In addition to performance-based rewards or penalties, flexible plans could include market-based rates, price caps, index-based prices, and rates premised on the value of customer service. Such rates more closely mirror the competitive environment that utilities are confronting.

Electric industry regulation

The ability to enter into long-term arrangements at negotiated rates without having to seek regulatory approval for each contract is also important in the electric industry. (While contracting at reduced rates constrains financial performance, it lessens the potential adverse impact in the event of retail wheeling. Since revenue losses associated with this strategy are not likely to be recovered from ratepayers, utilities must control costs well enough to remain competitive if they are to sustain current levels of bondholder protection.)

Natural gas industry regulation

In the gas industry, too, several state commission policies weigh heavily in the evaluation of regulatory support. Examples include stabilization mechanisms to adjust revenues for changes in weather or the economy, rate and service unbundling decisions, revenue and cost allocation between sales and transportation customers, flexible industrial rates, and the general supportiveness of construction costs and gas purchases.

Water industry regulation

In all water utility activities, federal and state environmental regulations continue to play a critical role. The legislative timetable to effect the 1986 amendments to the Safe Drinking Water Act of 1974 was quite aggressive. But environmental standards-setting has actually slowed over the past couple of years due largely to increasing sentiment that the stringent, costly standards have not been justified on the basis of public health. A moratorium on the promulgation of significant new environmental rules is anticipated.

Telecommunications industry regulation

Despite the advances in telecommunications deregulation, analysis of regulation of telephone operators will continue to be a key rating determinant for the foreseeable future. The method of regulation may be either classic rate-based rate of return or some form of price cap mechanism. The most important factor is to assess whether the regulatory framework—no matter which type—provides sufficient financial incentive to encourage the rated company to maintain its quality of service and to upgrade its plant to accommodate new services while facing increasing competition from wireless operators and cable television companies.

Where regulators do still set tariffs based on an authorized return, Standard & Poor's strives to explore with regulators their view of the rate-of-return components that can materially impact reported versus regulatory earnings. Specifically these include the allowable base upon which the authorized return can be earned, allowable expenses, and the authorized return. Since regulatory oversight runs the gamut from strict, adversarial relationships with the regulated operating companies to highly supportive postures, Standard & Poor's probes beyond the apparent regulatory environment to ascertain the actual impact of regulation on the rated company.

Management

Evaluating the management of a utility is of paramount importance to the analytical process since management's abilities and decisions affect all areas of a company's operations. While regulation, the economy, and other outside factors can influence results, it is ultimately the quality of management that determines the success of a company.

With emerging competition, utility management will be more closely scrutinized by Standard & Poor's and will become an increasingly critical component of the credit evaluation. Management strategies can be the key determinant in differentiating utilities and in establishing where companies lie on the business position spectrum. It is imperative that managements be adaptable, aggressive, and proactive if their utilities are to be viable in the future; this is especially important for utilities that are currently uncompetitive.

The assessment of management is accomplished through meetings, conversations, and reviews of company plans. It is based on such factors as tenure, industry experience, grasp of industry issues, knowledge of customers and their needs, knowledge of competitors, accounting and financing practices, and commitment to credit quality. Management's ability and willingness to develop workable strategies to address their systems' needs, to deal with the competitive pressures of free market, to execute reasonable and effective long-term plans, and to be proactive in leading their utilities into the future are assessed. Management quality is also indicated by thoughtful balancing of public and private priorities, a record of credibility, and effective communication with the public, regulatory bodies, and the financial community. Boards of directors will receive ever more attention with respect to their role in setting approbriate management incentives.

With competition the watchword, Standard & Poor's also focuses on management's efforts to enhance financial condition. Management can bolster bondholder protection by taking any number of discretionary actions, such as selling common equity, lowering the common dividend payout, and paying down debt. Also important for the electric industry will be creativity in entering into strategic alliances and working partnerships that improve efficiency, such as central dispatching for a number of utilities or locking up at-risk customers through long-term contracts or expanded flexible pricing agreements. Proactive management teams will also seek alternatives to traditional rate-base, rate-of-return rate-making, move to adopt higher depreciation rates for generating facilities, segment customers by individual market preferences, and attempt to create superior service organizations.

In general, management's ability to respond to mounting competition and changes in the utility industry in a swift and appropriate manner will be necessary to maintain credit health.

Fuel, power, and water supply

Assessment of present and prospective fuel and power supply is critical to every electric utility analysis, while gauging the long-term natural gas supply position for gas pipeline and distribution companies and the water resources of a water utility is equally important. There is no similar analytical category for telephone utilities.

Electric utilities

For electric utilities emphasis is placed on generating

reserve margins, fuel mix, fuel contract terms, demandside management techniques, and purchased power arrangements. The adequacy of generating margins is examined nationally, regionally, and for each individual company. However, the reserve margin picture is muddied by the imprecise nature of peak-load growth forecasting, and also supply uncertainty relating to such things as Canadian capacity availability and potential plant shutdowns due to age, new NRC rules, acid rain remedies, fuel shortages, problems associated with nontraditional technologies, and so forth. Even apparently ample reserves may not be what they seem. Moreover, the quality of capacity is just as important as the size of reserves. Companies' reserve requirements differ, depending upon individual operating characteristics.

Fuel diversity provides flexibility in a changing environment. Supply disruptions and price hikes can raise rates and ignite political and regulatory pressures that ultimately lead to erosion in financial performance. Thus, the ability to alter generating sources and take advantage of lower cost fuels is viewed favorably.

Dependence on any single fuel means exposure to that fuel's problems: electric utilities that rely on oil or gas face the potential for shortages and rapid price increases; utilities that own nuclear generating facilities face escalating costs for decommissioning; and coal-fired capacity entails environmental problems stemming from concerns over acid rain and the "greenhouse effect."

Buying power from neighboring utilities, qualifying facility projects, or independent power producers may be the best choice for a utility that faces increasing electricity demand. There has been a growing reliance on purchased power arrangements as an alternative to new plant construction. This can be an important advantage, since the purchasing utility avoids potential construction cost overruns as well as risking substantial capital. Also, utilities can avoid the financial risks typical of a multiyear construction program that are caused by regulatory lag and prudence reviews. Furthermore, purchased power may enhance supply flexibility, fuel resource diversity, and maximize load factors. Utilities that plan to meet demand projections with a portfolio of supply-side options also may be better able to adapt to future growth uncertainties. Notwithstanding the benefits of purchasing, such a strategy has risks associated with it. By entering into a firm long-term purchased power contract that contains a fixed-cost component, utilities can incur substantial market, operating, regulatory, and financial risks. Moreover, regulatory treatment of purchased power removes any upside potential that might help offset the risks. Utilities are not compensated through incentive rate-making; rather, purchased power is recovered dollar-for-dollar as an operating ex-

To analyze the financial impact of purchased power, Standard & Poor's first calculates the net present value of future annual capacity payments (discounted at 10%). This represents a potential debt equivalent—the off-balance-sheet obligation that a utility incurs when it enters into a long-term purchased power contract. However, Standard

& Poor's adds to the utility's balance sheet only a portion of this amount, recognizing that such a contractual arrangement is not entirely the equivalent of debt. What percentage is added is a function of Standard & Poor's qualitative analysis of the specific contract and the extent to which market, operating, and regulatory risks are borne by the utility (the risk factor). For unconditional, take-orpay contracts, the risk factor range is from 40%-80%, with the average hovering around 60%. A lower risk factor is typically assigned for system purchases from coal-fired utilities and a higher risk factor is usually designated for unit-specific nuclear purchases. The range for take-and-pay performance obligations is between 10%-50%.

Gas utilities

For gas distribution utilities, long-term supply adequacy obviously is critical, but the supply role has become even more important in credit analysis since the Federal Energy Regulatory Commission's Order 636 eliminated the interstate pipeline merchant business. This thrust gas supply responsibilities squarely on local gas distributors. Standard & Poor's has always believed distributor management has the expertise and wherewithal to perform the job well, but the risks are significant since gas costs are such a large percentage of total utility costs. In that regard, it is imporant for utilities to get preapprovals of supply plans by state gulators or at least keep the staff and commissioners well informed. To minimize risks, a well-run program would diversify gas sources among different producers or marketers, different gas basins in the U.S. and Canada, and different pipeline routes. Also, purchase contracts should be firm, with minimal take-or-pay provisions, and have prices tied to an industry index. A modest percentage of fixed-price gas is not unreasonable. Contracts, whether of gas purchases or pipeline capacity, should be intermediate term. Staggering contract expirations (preferably annually) provides an opportunity to be an active market player. A modest degree of reliance on spot purchases provides flexibility, as does the use of market-based storage. Gas storage and on-property gas resources such as liquefied natural gas or propane air are effective peak-day and peakseason supply management tools.

Since pipeline companies no longer buy and sell natural gas and are just common carriers, connections with varied reserve basins and many wells within those basins are of great importance. Diversity of sources helps offset the risks arising from the natural production declines eventually experienced by all reserve basins and individual wells. Moreover, such diversity can enhance a pipeline's attractiveness as a transporter of natural gas to distributors and end users seeking to buy the most economical gas available for their needs.

Water utilities

Nearly all water systems throughout the U.S. have ample long-term water supplies. Yet to gain comfort, Standard & Poor's assesses the production capability of treatment plants and the ability to pump water from underground aquifers in relation to the usage demands from consumers.

Having adequate treated water storage facilities has become important in recent years and has helped many systems meet demands during peak summer periods. Of interest is whether the resources are owned by the utility or purchased from other utilities or local authorities. Owning properties with water rights provides more supply security. This is especially so in states like California where water allocations are being reduced, particularly since recent droughts and environmental issues have created alarm. Since the primary cost for water companies is treatment, it makes little difference whether raw water is owned or bought. In fact, compliance with federal and state water regulations is very high, and the overall cost to deliver treated water to consumers remains relatively affordable.

Asset concentration in the electric utility industry

In the electric industry, Standard & Poor's follows the operations of major generating facilities to assess if they are well managed or troubled. Significant dependence on one generating facility or a large financial investment in a single asset suggests high risk. The size or magnitude of a particular asset relative to total generation, net plant in service, and common equity is evaluated. Where substantial asset concentration exists, the financial profile of a company may experience wide swings depending on the asset's performance. Heavy asset concentration is most prevalent among utilities with costly nuclear units.

Earnings protection

In this category, pretax cash income coverage of all interest charges is the primary ratio. For this calculation, allowance for funds used during construction (AFUDC) is removed from income and interest expense. AFUDC and other such noncash items do not provide any protection for bondholders. To identify total interest expense, the analyst reclassifies certain operating expenses. The interest component of various off-balance-sheet obligations, such as leases and some purchased-power contracts, is included in interest expense. This provides the most direct indication of a utility's ability to service its debt burden.

While considerable emphasis in assessing credit protection is placed on coverage ratios, this measure does not provide the entire earnings protection picture. Also important are a company's earned returns on both equity and capital, measures that highlight a firm's earnings performance. Consideration is given to the interaction of embedded costs, financial leverage, and pretax return on capital.

Capital structure

Analyzing debt leverage goes beyond the balance sheet and covers quasi-debt items and elements of hidden financial leverage. Noncapitalized leases (including sale/leaseback obligations), debt guarantees, receivables financing, and purchased-power contracts are all considered debt equivalents and are reflected as debt in calculating capital

structure ratios. By making debt level adjustments, the analyst can compare the degree of leverage used by each utility company.

Furthermore, assets are examined to identify undervalued or overvalued items. Assets of questionable value are discounted to more accurately evaluate asset protection.

Some firms use short-term debt as a permanent piece of their capital structure. Short-term debt also is considered part of permanent capital when it is used as a bridge to permanent financing. Seasonal, self-liquidating debt is excluded from the permanent debt amount, but this situation is rare—with the exception of certain gas utilities. Given the long life of almost all utility assets, short-term debt may expose these companies to interest-rate volatility, remarketing risk, bank line backup risk, and regulatory exposure that cannot be readily offset. The lower cost of shorter-term obligations (assuming a positively sloped yield curve) is a positive factor that partially mitigates the risk of interest-rate variability. As a rule of thumb, a level of short-term debt that exceeds 10% of total capital is cause for concern.

Similarly, if floating-rate debt and preferred stock constitute over one-third of total debt plus preferred stock, this level is viewed as unusually high and may be cause for concern. It might also indicate that management is aggressive in its financial policies.

A layer of preferred stock in the capital structure is sually viewed as equity—since dividends are discretionary and the subordinated claim on assets provides a cushion for providers of debt capital. A preferred component of up to 10% is typically viewed as a permanent wedge in the capital structure of utilities. However, as rate-of-return regulation is phased out, preferred stock may be viewed by utilities—as many industrial firms would—as a temporary option for companies that are not current taxpayers that do not benefit from the tax deductibility of interest. Even now, floating-rate preferred and money market perpetual preferred are problematic; a rise in the rate due to deteriorating credit quality tends to induce a company to take out such preferred stock with debt. Structures that convey tax deductibility to preferred stock have become very popular and do generally afford such financings with equity treatment.

Cash flow adequacy

Cash flow adequacy relates to a company's ability to generate funds internally relative to its needs. It is a basic component of credit analysis because it takes cash to pay expenses, fund capital spending, pay dividends, and make interest and principal payments. Since both common and preferred dividend payments are important to maintain capital market access, Standard & Poor's looks at cash flow measures both before and after dividends are paid.

To determine cash flow adequacy, several quantitative relationships are examined. Emphasis is placed on cash flow relative to debt, debt service requirements, and capital spending. Cash flow adequacy is evaluated with respect to a firm's ability to meet all fixed charges, including capacity payments under purchased-power contracts. Despite the conditional nature of some contracts, the purchaser is obligated to pay a minimum capacity charge. The ratio used is funds from operations plus interest and capacity payments divided by interest plus capacity payments.

Financial flexibility/capital attraction

Financing flexibility incorporates a utility's financing needs, plans, and alternatives, as well as its flexibility to accomplish its financing program under stress without damaging creditworthiness. External funding capability complements internal cash flow. Especially since utilities are so capital intensive, a firm's ability to tap capital markets on an ongoing basis must be considered. Debt capacity reflects all the earlier elements: earnings protection, debt leverage, and cash flow adequacy. Market access at reasonable rates is restricted if a reasonable capital structure is not maintained and the company's financial prospects dim. The analyst also reviews indenture restrictions and the impact of additional debt on covenant tests.

Standard & Poor's assesses a company's capacity and willingness to issue common equity. This is affected by various factors, including the market-to-book ratio, dividend policy, and any regulatory restrictions regarding the composition of the capital structure.

Formulas for key ratios

Pretax interest coverage = Pretax income from continuing operations + interest expense

Gross interest

Pretax fixed charge coverage including rents = Pretax income from continuing operations + interest expense + gross rents

Gross interest + gross rents

Pretax funds flow interest coverage = Pretax funds flow + interest expense

Gross interest

Funds from operations as a % of total debt = Funds from operations

Total debt

Free operating cash flow as a % of total debt = Free operating cash flow

Total debt

Pretax return on permanent capital =

Pretax income from continuing operations + interest expense

x 100

Sum of (1) average of beginning of year and end of year current maturities, long-term debt, non-current deferred taxes, and equity and

(2) average short-term borrowings during year as disclosed in

footnotes

Operating income as a % of sales = Operating income

Long-term debt as a % of capitalization = Long-term debt

Long-term + equity

Total debt as a % of capitalization = Total debt

Total debt + equity

Total debt + 8 times gross rentals paid Total debt + 8 times rents as a % of adjusted capitalization =

Total debt + 8 times gross rentals paid + equity

Glossary

Equity

Shareholders' equity (including preferred stock) plus minority interest.

Free operating cash flow

Funds from operations minus capital expenditures, minus (plus) the increase (decrease) in working

capital (excluding changes in cash, marketable securities, and short-term debt).

Funds from operations

Net income from continuing operations plus depreciation, amortization, deferred income taxes and other

noncash items.

Gross interest

Gross interest incurred before subtracting (1) capitalized interest, (2) interest income.

Gross rents

Gross operating rents paid before sublease income.

Interest expense

Interest incurred minus capitalized interest, plus amortization of capitalized interest.

Long-term debt

As reported on the balance sheet, including capitalized lease obligations.

Net cash flow

Operating income

Funds from operations less preferred and common dividends.

Sales minus cost of goods manufactured (before depreciation and amortization), selling, general and

administrative, and research and development costs.

Pretax funds flow

Pretax income from continuing operations plus depreciation, amortization, and other noncash items.

Total debt

Long-term debt plus current maturities, commercial paper, and other short-term borrowings.



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Standard & Poor's UTILITIES PERSPECTIVES

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STANDARD &POOR'S

Utility Financial Targets Are Revised

Standard & Poor's has revised the four principal financial targets that it uses to analyze the credit quality of all investor-owned electric, natural gas, and water utilities in the U.S. (see table on page 3).

. Standard & Poor's has created a single set of financial targets that can be applied across the different utility segments. These financial measures reflect the convergence that is occurring throughout the utility industry and the changing risk profile of the industry in general.

No rating changes will result from establishing these new financial targets since they were developed by integrating prior utility financial benchmarks and historical industrial medians. The new financial targets, like the previous benchmarks, pertain to risk-adjusted ratios that distinguish between lower-risk and higher-risk activities. The targets have been broadened to correspond with Standard & Poor's 10-point business profile assessments. The business profile scores assess the qualitative attributes of a firm, with "1" being considered lowest risk and "10" highest risk. Thus, the new targets allow for comparability on a single scale between typically lower-risk activities, such as water operations, gas distribution, and electric transmission, and higher-risk activities, such as merchant power generation, oil and gas exploration and production, and energy trading and marketing. For example, a water utility, which can expect to have a lower business risk profile than a typical integrated electric utility, will be required to meet less stringent financial targets for any given rating category.

Funds from operations to total debt, funds from operations interest coverage, pretax interest coverage, and total debt to total capital are the four credit-protection ratios that are an integral part of

Standard & Poor's quantitative review on the overall credit analysis of the utility sector. Standard & Poor's recognizes that the nature of utilities' business strategies is changing significantly and is shifting toward higher-risk endeavors. These undertakings bear risk characteristics that are more representative of an industrial company than a regulated utility. Therefore, Standard & Poor's also incorporates a greater reliance on several additional ratios in its credit analysis. These include, but are not limited to, pretax return on permanent capital, funds from operations to current obligations, earnings before interest and taxes to total assets, net cash flow to capital expenditures, and capital expenditures to average total capital. Additionally, further analysis of the cash flow coverage of all obligations (including preferred stock) is performed. Although these measures do not have published targets, broader use of these financial ratios. combined with the four principal targets, provides greater depth to the fundamental analysis used in the rating evaluation process.

Consistent with Standard & Poor's ratings methodology," the four published financial targets will be used with other quantitative measures, business risk analysis, and comparative analysis of peer groupings to determine credit ratings. The new targets are designed to assist utilities, utility affiliates, and the investment community in assessing the relative financial strength of issuers.

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(continued on page 3)

UTILITY SPOTLIGHT

AEP/CSW Merger May Close by Year End page 2



COVER STORY (CONTINUED

Revised Utility Group Financial Targets*

3 36.5 30.5 30.5 24.5 24.5 5 40.0 33.0 33.0 27.0 27.0 5 6 47.0 39.0 39.0 31.0 31.0 31.0 36.5 56.0 55.0 55.0 42.5 42.5	185 <10.5 140 140 9.5 17.5 17.5 12.0 20.5 20.5 15.0 22.0 22.0 16.0 24.5 24.5 17.0 27.5 27.5 18.5 32.0 32.0 22.0 39.0 39.0 28.0	35 40 170 60 450 75 160 85 178 95 185 110 220 125 280 175
---	--	--

FFO interest coverage Business position 1 2 3 4 5 6	31 26 39 33 45 39 51 45 54 48 66 47 84 70	2.6 3.3 3.9 4.5 4.8 5.7 7.0	1.9 2.5 3.1 3.8 4.0 4.5 5.1	19 09 25 15 31 21 30 27 40 30 45 31 51 33	*386* <0.9 <1.5 2.1 2.7 3.0 3.1 3.3	1.3 1.8 2.1 2.2 2.3	13 05 18 05 18 05 21 11 22 12 23 13
7 8 9 10	84 70 102 83	7.0 B.3 9.5 11.3	5.1 5.9 7.1 8.6	51 33 59 35 71 43 86 53	3.3 3.5 4.3 5.3	2.3 2.4 2.9 3.6	23 13 24 15 29 18 36 23

Pretax interest cove	erage		Ά.	**************************************	.BB.		- 8
Business position	28 24	2.4	1.8	18 9.8	<0.8		
1	3A 29	2.9	2.3	23 13	<1.3		
2	An 34	3.4	2.8	28 - 1.8	1.8	1.1	1.1 0.3
3	46 40	4.0	3.3	33 22	2.2	1.3	1.3 05
4	50 43	4.3	3.5	35 24	2.4	1.5	1.5 0.6
5 -	67 52	5.2	4.0	4.0 2.6	2.6	1.6	1.6 0.7
D	80 65	6.5	4.7	47 28	2.8	1.8	18 09
<u>/</u>	99 80	8.0	5.5	5.5 3.0	3.0	2.0	2.0 1.1
8	5.5	9.1	6.6	66 3.7	3.7	2.5	2.5 1.4
9		11.1	8.4	8.4 5.0	5.0	3.3	3.3 1.8

Total debt to total capital Business position 1	55.0 51.0 47.5 43.0 41.5 39.5 37.5 35.0 30.0 24.0	60.5 56.5 53.0 49.5 47.0 46.0 45.0 43.0 39.0	78087 505 675 565 635 570 610 495 57.0 47.0 55.0 45.0 53.5 45.0 52.5 43.0 51.5 33.0 40.5 33.0 40.5	>67.5 >63.5 61.0 57.0 55.0 53.5 52.5 51.5 47.5 40.5	67.0 64.0 62.5 60.5 59.5 58.0 54.0 46.0	57.0 74.0 64.0 77.5 62.5 89.0 59.5 88.0 58.0 66.0 54.0 65.0 54.0 65.0
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^{*}As of June 1999. FFO--Funds from operations.

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CONSUMERS ILLINOIS WATER COMPANY CAPITALIZATION AND FINANCIAL STATISTICS (1) 1997 - 2001, INCLUSIVE

	<u>2001</u>	2000 (MILLI	1999 ONS OF DOLLARS)	1998	<u>1997</u>	
CAPITALIZATION STATISTICS		•	,			
AMOUNT OF CAPITAL EMPLOYED TOTAL PERMANENT CAPITAL SHORT-TERM DEBT TOTAL-CAPITAL EMPLOYED	\$89.146 5.250 \$94.396	\$85.213 5.700 \$90.913	\$75.740 2.500 \$78.240	\$74.470 1.500 \$75,970	\$70.083 4.100 \$74.183	
INDICATED AVERAGE CAPITAL COST RATES (2) TOTAL DEBT PREFERRED DEBT	7.7 % 5.5	7.9 % 5.5	5.0 % 4.3	8.3 % 5.5	8.2 % 7.0	5 YEAR AVERAGE
DIVIDEND PAYOUT RATIO	134.6 %	0.0 %	68.0 %	85.2 %	96.0 %	76.8 %
CAPITAL STRUCTURE RATIOS BASED ON TOTAL PERMANENT CAPITAL: LONG-TERM DEBT MINORITY INTEREST COMMON EQUITY TOTAL	48.0 % 0.5 <u>51.5</u> 100.0 %	46.9 % 0.5 52.6 100.0 %	49.4 % 0.5 <u>50.1</u> 100.0 %	50.2 % 0.6 49.2 100.0 %	53.4 % 0.6 46.0 100.0 %	49.6 % 0.5 <u>49.9</u> 100.0 %
BASED ON TOTAL CAPITAL: TOTAL DEBT, INCLUDING SHORT-TERM MINORITY INTEREST COMMON EQUITY TOTAL	50.9 % 0.4 <u>48.7</u> 100.0 %	50.2 % 0.4 <u>49.4</u> 100.0 %	51.0 % 0.5 <u>48.5</u> 100.0 %	51.2 % 0.5 <u>48.3</u> 100.0 %	56.0 % 0.5 43.5 100.0 %	51.8 % 0.5 <u>47.7</u> 100.0 %
FINANCIAL STATISTICS						
RATE OF RETURN ON AVERAGE COMMON EQUITY	9.4 %	9.1 %	10.2 %	8.3 %	8.4 %	9.1 %
COVERAGES-EXCLUDING ALL AFUDC (3) BEFORE INCOME TAXES: ALL INTEREST CHARGES AFTER INCOME TAXES: ALL INTEREST CHARGES OVERALL COVERAGE: ALL INTEREST + PFD. DIV.	2.92 x 2.19 2.17	2.65 x 2.02 2.01	2.88 x 2.20 2.19	2.39 x 1.87 1.86	2.14 x 1.79 1.78	2.60 x 2.01 2.00

SEE PAGE 2 FOR NOTES.

Consumers Illinois Water Company Capitalization and Financial Statistics 1997-2001, Inclusive

Notes:

- (1) All capitalization and financial statistics are based upon financial statements as originally reported in each year.
- (2) Computed by relating actual long-term debt interest or preferred stock dividends booked to average of beginning and ending long-term debt or preferred stock reported to be outstanding.
- (3) Coverages excluding all AFUDC represent the number of times available earnings, excluding all AFUDC, cover fixed charges.

PROXY GROUP OF SEYEN C. A. TURNER WATER COMPANIES CAPITALIZATION AND FINANCIAL STATISTICS (1) 1997 - 2001, INCLUSIVE

	2001	2000 (MILLIO	1999 ONS OF DOLLARS)	<u>1998</u>	<u>1997</u>	
CAPITALIZATION STATISTICS		•	•			
AMOUNT OF CAPITAL EMPLOYED TOTAL PERMANENT CAPITAL SHORT-TERM DEBT TOTAL CAPITAL EMPLOYED	\$329,328 <u>\$26,285</u> <u>\$355,612</u>	\$298.351 \$22.931 \$321,282	\$261.200 \$21.328 \$282.528	\$204.458 <u>\$10.735</u> \$215.190	\$186.020 \$8.730 \$194.751	
INDICATED AVERAGE CAPITAL COST RATES (2) TOTAL DEBT PREFERRED STOCK	7.1 %	7.7 %	7.7 %	7.9 %	7.8 %	5 YEAR
	6.3	5.9	5.1	5.0	5.3	AVERAGE
CAPITAL STRUCTURE RATIOS BASED ON TOTAL PERMANENT CAPITAL: LONG-TERM DEBT MINORITY INTEREST PREFERRED STOCK COMMON EQUITY TOTAL	53.7 %	52.0 %	50.6 %	49.6 %	49.5 %	51.0 %
	0.0	0.0	0.0	0.0	0.0	0.0
	0.7	0.8	0.9	1.3	1.5	1.0
	<u>45.6</u>	47.2	<u>48.5</u>	<u>49.1</u>	4 <u>9.0</u>	48.0
	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %
BASED ON TOTAL CAPITAL: TOTAL DEBT, INCLUDING SHORT-TERM MINORITY INTEREST PREFERRED STOCK COMMON EQUITY TOTAL	56.6 %	54.4 %	53.1 %	52.0 %	51.7 %	53.6 %
	0.0	0.0	0.0	0.0	0.0	0.0
	0.7	0.8	0.9	1.3	1.5	1.0
	42.7	<u>44.8</u>	<u>46.0</u>	<u>46.7</u>	<u>46.8</u>	<u>45.4</u>
	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %
FINANCIAL STATISTICS						
FINANCIAL RATIOS - MARKET BASED EARNINGS / PRICE RATIO MARKET / AVERAGE BOOK RATIO DIVIDEND YIELD DIVIDEND PAYOUT RATIO RATE OF RETURN ON AVERAGE BOOK COMMON EQUITY	5.0 %	5.4 %	5.5 %	5.6 %	6.1 %	5.5 %
	218.0	193.3	207.0	195.7	175.4	197.9
	3.5	3.9	3.7	3.9	4.4	3.9
	63.1	76.0	68.3	69.7	72.4	69.9
COVERAGES - EXCLUDING ALL AFUDC (3) BEFORE INCOME TAXES: ALL INTEREST CHARGES AFTER INCOME TAXES: ALL INTEREST CHARGES OVERALL COVERAGE: ALL INTEREST + PFD. DIV.	2.92 x	2.85 x	3.14 x	2.95 x	3.05 x	2.98 x
	2.16	2.12	2.29	2.20	2.26	2.21
	2.14	2.10	2.25	2.16	2.22	2.17

Proxy Group of Seven C. A, Turner Water Companies Capitalization and Financial Statistics 1997-2001, Inclusive

Notes:

- (1) All capitalization and financial statistics for the group are the arithmetic average of the achieved results for each individual company in the group, and are based upon financial statements as originally reported in each year.
- (2) Computed by relating actual long-term debt interest or preferred stock dividends booked to average of beginning and ending long-term debt or preferred stock reported to be outstanding.
- (3) Coverages excluding all AFUDC represent the number of times available earnings, excluding all AFUDC, cover fixed charges.

Selection Criteria:

The basis of selection was to include those water companies: 1) which are included in the Water Company Group of C. A. Turner Public Utility Reports (April 2003); and 2) which have Value Line (Standard Edition) five-year EPS growth rate projections or Thomson FN / First Call consensus five-year EPS growth rate projections.

The following seven water companies met the above criteria:

American States Water Co. Artesian Resources, Inc. California Water Service Group Middlesex Water Co. Philadelphia Suburban Corp. Southwest Water Company York Water Co.

Capital Structure Based upon Total Capital for the Proxy Group of Seven C. A. Turner Water Companies for the Years 1997 through 2001

	2004	2000	1999	1998	1997	5 YEAR AVERAGE
	<u>2001</u>	<u>2000</u>	1990	1000	1001	COLITION
American States Water Co.					39.20 %	44.14 %
Long-Term Debt	52.63 %	42.50 %	47.98 %	38.38 % 12.05	8.82	8.39
Short-Term Debt	4.27	10.80	6.01 0.00	0.00	0.00	0.00
Minority Interest	0.00	0.00		0.64	0.00	0.55
Preferred Stock	0.40	0.46	0.56 45.45	48.93	51.27	46.92
Common Equity	42.70	46,24	45.45 100.00 %	1 <u>00.00</u> %	100.00 %	100.00 %
Total Capital	<u>100.00</u> %	<u>100.00</u> %	100.00 %	100.00 W	100.00	100.00
Artesian Resources Corp.						
Long-Term Debt	49.49 %	58.78 %	46.49 %	46.54 %	52.60 %	50.78 % 9.17
Short-Term Debt	16.69	3.65	10.68	12.09 0.00	2.74 0.00	0.00
Minority Interest	0.00	0.00	0.00 1.01	1.26	1,61	1,00
Preferred Stock	0.46	0.65	41.82	40.11	43.05	39.05
Common Equity	33.36	<u>36,92</u>	100.00 %	100.00 %	100.00 %	100.00 %
Total Capital	100.00 %	<u>100.00</u> %	100.00	100.00 A	100.00	100.00
California Water Service Group				44 57 84	40.00.00	45.00 %
Long-Term Debt	48.36 %	46.69 %	45.05 %	41.57 %	43,33 %	45.00 %
Short-Term Debt	5.11	3.59	3.85 0.00	6.75 0.00	4.52 0.00	0.00
Minority Interest	0.00	0.00		1.04	1.08	D.95
Preferred Stock	0.81	0.85	0.98	50.64	51.07	49.28
Common Equity	45.72	48.87	<u>50.12</u>	100.00 %	100.00 %	100.00 %
Total Capital	<u>100.00</u> %	<u>100.00</u> %	<u>100.00</u> %	100.00 %	<u>100.00</u> %	100.00
Middlesex Water Company						50 40 W
Long-Term Debt	49.70 %	50.48 %	51.88 %	51.79 %	48.26 %	50,42 %
Short-Term Debt	7.43	3.71	1.26	0.66	0.51	2.71 0.00
Minority Interest	0.00	0.00	0.00	0.00	0.00	3.04
Preferred Stock	2.28	2.49	2.55	3.31	4.55 46.68	43.83
Common Equity	<u>40.59</u>	43.32	44.31	44.24 100.00 W	100.00 %	1 <u>00.00</u> %
Total Capital	<u>100,00</u> %	<u>100,00</u> %	<u>100.00</u> %	<u>100.00</u> %	100.00	<u>100.00</u> A
Philadelphia Suburban Corp.						
Long-Term Debt	47.67 %	48.18 %	47.44 %	52.40 %	52.88 %	49.71 %
Short-Term Debt	9.83	8.85	11.48	1.05	2.34	6.71
Minority Interest	0.07	0.28	0.29	0.00	0.00	0.13 0.55
Preferred Stock	0.10	0.17	0,19	0. 6 4	1.67	
Common Equity	<u>42.33</u>	42.52	40.60	45.91	<u>43.11</u> 100.00 %	<u>42.89</u> 100.00 %
Total Capital	<u>100.00</u> %	<u>100.00</u> %	<u>100.00</u> %	<u>100.00</u> %	100,00 %	100.00
Southwest Water Company						40 F0 W
Long-Term Debt	55.97 %	51,45 %	46.72 %	49.95 %	43.70 %	49.56 %
Short-Term Debt	0.00	0.00	0.00	0.00	10.15 0.00	2.03 0.00
Minority Interest	0.00	0.00	0.00	0.00 0.74	0.00	0.60
Preferred Stock	0.41	0.51	0.68 52.60	49.31	45.42	47.80
Common Equity	43.62	48.04	100.00 %	100.00 %	100.00 %	100.00 %
Total Capital	<u>100.00</u> %	<u>100.00</u> %	100.00	100.00 %	100.00	100.00
York Water Company						40.50.84
Long-Term Debt	46.35 %	48.29 %	50.41 %	51.30 %	51.62 %	49.59 %
Short-Term Debt	2.83	3.90	2.20	0,00	1.36	2.06 0.00
Minority Interest	0.00	0.00	0.00	0.00 0.00	0.00 0.00	0.00
Preferred Stock	0.00	0.00	0.00		47.02	48.35
Common Equity	<u>50.82</u>	47.81	47.39	48.70	100.00 %	100,00 %
Total Capital	<u>100.00</u> %	<u>100.00</u> %	<u>100.00</u> %	<u>100.00</u> %	100.00 %	100.00
Proxy Group of Seven C. A. Turner Water Companies				•		
Long-Term Debt	50.02 %	49,48 %	47.99 %	47,42 %	47.37 %	48.46 %
Short-Term Debt	6.60	4.93	5.07	4.66	4.35	5.12
Minority Interest	0.01	0.04	0.04	0.00	0.00	0.02
Preferred Stock	0.64	0.74	0.86	1.09	1.48	0.96
Common Equity	42.73	44.81	46.04	46.83	46.80	<u>45,44</u>
Total Capital	100.00 %	100.00 %	100,00 %	100.00 %	100.00 %	100.00 %
•					=-	

PROXY GROUP OF THIRTEEN UTILITIES SELECTED ON THE BASIS OF LEAST RELATIVE DISTANCE CAPITALIZATION AND FINANCIAL STATISTICS (1) 1997 - 2001, INCLUSIVE

		5 YEAR	AVERAGE 51.8 % 0.1 1.6 100.0 %	55.4 % 0.1 1.5 43.0 100.9 %	გ. გ. გ. გ. გ. ფ. დ. დ. გ.	12.5 %	9. 15. 2.3.36 × 3.3.4
<u>1997</u>	\$3,410.878 \$331.638 \$3.742.517	7,5 % 5.9 %	47.6 % 0.1 2.3 50.0 100.0 %	50.8 % 0.1 2.1 47.0 199.0 %	6.8 % 182.2 5.3 77.3	12.1 %	3.46 x 2.57 2.46
1998	\$3,617,455 \$288,678 \$3,806,130	4.7. 8. 0.3.	48.6 % 0.3 1.7 1.7 49.6 %	51.8 % 0.3 1.5 100.0 %	3.5 % 197.3 4.83 7.83	11.2 %	3.20 × 2.42 2.33
1999 (MILLIONS OF DOLLARS)	\$3,663.998 <u>\$564.798</u> \$4,228.79 <u>6</u>	7.1 %	52.4 % 0.2 1.4 48.0 100.0 %	66.2 % 0.2 1.3 42.3 100.0 %	6.3 7.89.6 8.67. 8.67.	2. %	3.23 × 2.41 × 2.33
(MILLIO 2000	\$3,502.319 <u>\$488.782</u> \$3,991,101	7.3 % 5.8	53.9 % 0.0 0.0 % 1.3 44.8 1000 %	58.1 % 0.0 1.2 40.7 100.0	ი მა. 1987 გ. 1878 გ. 1878 გ. 1878	13.3 %	2.93 x 2.27 2.21
2001	\$3,955,943 \$361,172 \$4.317,115	ရေး ရေး ရေး ရေး	57.0 % 0.0 1.2 41.8 100.0 %	60.3 % 0.0 7.1 38.6 100.0 %	6.3 % 219.9 4.3 74.4	13.65 %	2 2 2 2 2 2 2 4 2 4 2 4 2 4 2 4 2 4 2 4
	CAPITALIZATION STATISTICS AMOUNT OF CAPITAL EMPLOYED TOTAL PERMANENT CAPITAL SHORT-TERM DEBT TOTAL CAPITAL EMPLOYED	INDICATED AVERAGE CAPITAL COST RATES (2) TOTAL DEBT PREFERRED STOCK	CAPITAL STRUCTURE RATIOS BASED ON TOTAL PERMANENT CAPITAL: LONG-TERM DEBT MINORITY THEREST PREFERRED STOCK COMMON EQUITY TOTAL	BASED ON TOTAL CAPITAL: TOTAL DEBT, INCLUDING SHORT-TERM MINORITY INTEREST PREFERRED STOCK COMMON EQUITY TOTAL	EINANCIAL STATISTICS EINANCIAL RATIOS - MARKET BASED EARNINGS / PRICE RATIO MARKET / AVERAGE BOOK RATIO DIVIDEND YIELD	DIVIDEND FATURI RATE OF RETURN ON AVERAGE BOOK COMMON FOUITY	COVERAGES - EXCLUDING ALL AFUDC (3) BEFORE INCOME TAXES: ALL INTEREST CHARGES ATTER INCOME TAXES: ALL INTEREST CHARGES OVERALL COVERAGE: ALL INTEREST + PFD. DIV.

Proxy Group of Thirteen Utilities Selected on the Basis of Least Relative Distance Capitalization and Financial Statistics 1997-2001, Inclusive

Notes:

- (1) All capitalization and financial statistics for the group are the arithmetic average of the achieved results for each individual company in the group, and are based upon financial statements as originally reported in each year.
- (2) Computed by relating actual long-term debt interest or preferred stock dividends booked to average of beginning and ending long-term debt or preferred stock reported to be outstanding.
- (3) Coverages excluding all AFUDC represent the number of times available earnings, excluding all AFUDC, cover fixed charges.

Selection Criteria:

The basis of selection was to include those electric, gas, combination electric and gas, and water utilities: 1) which are included in Standard & Poor's Compustat Services, Inc., PC Plus Database; 2) which have actively traded common stock; 3) which are most similar in risk to Consumers Illinois Water Company based upon an analysis of the least relative distance of eight financial and operating ratios as explained in detail in Ms. Ahern's direct testimony; 4) which have Value Line (Standard Edition) or ThomsonFN / First Call consensus five-year EPS growth rate projections; and 5) which have not cut or omitted their common dividends in the five years ending 2001 or through the time of the preparation of Ms. Ahern's direct testimony, nor are expected by Value Line Investment Survey (Standard Edition) to cut their dividends during the next five years

Source of Information:

Standard & Poor's Compustat Services, Inc., PC Plus Research Insight Database

Capital Structure Based upon Total Capital for the Proxy Group of Thirdeen Utilities Selected on the Basis of Least Relative Distance for the Years 1997 through 2001

% <u>00.00</u> 1	% 00'001	% <u>00.001</u>	% <u>00.001</u>	% 00.001	% 00 001	Total Capital
44.84	76.24	44.38	44.49	16.94	72 20	Common Equity
87.E	62.14	3.93	3.68	3.60	3.30	Preferred Stock
8E.D	00.0	9/1	00.0	00.0	00.00	Minority Interest
9.20	74.01	66.6	SZ*6	≯8 .∂	10.53	Short-Term Debt
% E8.14	42.22 %	% bS'0b	% 80 ZÞ	% S9°E1⁄r	% Z9'OV	Long-Term Debt
						Northwest Natural Gas Co.
% <u>00.001</u>	% <u>00.001</u>	% <u>00,001</u>	% <u>00.001</u>	% <u>00 00 l</u>	% 00.001	Total Capital
<u> </u>	89.34	44,24	44.31	<u>43.32</u>	65 01	Common Equity
₹0.£	35.4	3.31	7.22	5,49	2.28	Preferred Stock
0.00	00.00	00.00	0.00	0.00	00 ^0	taenatul yinoniM
17.2	15.0	99.0	1,26	3.71	£4.7	Short-Term Debt
% Sp.03	% 9Z.8h	% 6L13	% 88.12	% 87.0 2	% 07.9h	Long-Term Debt
						Middlesex Water Company
ev 55.501	% 00 00 l	% 00 001	or <u>DD:001</u>	% <u>00.001</u>	% <u>00.001</u>	Total Capital
% <u>00.001</u>		88.13	% 00.001			Common Equity
<u>00.14</u>	23.61		<u>27.34</u>	<u>29.75</u>	<u>50.75</u>	
67.0	96.0	98'0	67.0	17.0	69.0	Preferred Stock
00.0	00.0	00'0	00.0	0.00	00.0	Allority Interest
4,32	28.4	41.7	9:30	00.0	96.0	Long-Term Debt Short-Term Debt
% 88.CG	% Z9.04	% Z1 Ob	43.22 %	% 79.17	% 67.ET	DPL inc.
						201 190
% 000 001	% ÖÖ'ÖÖ‡	% 00 001	% <u>00.001</u>	% 00 001	% 00 001	Total Capital
42.02	48.58	<u>£8.74</u>	40.41	<u>€7.3€</u>	78.3E	Common Equity
99"1	80.S	2,08	1.28	91.1 97.90	61.1 73.20	Preferred Stock
00.0	00.0	00.0	00.0	00.0	00.0	Minority Interest
20.7	70.4	07.7	5.39	83.7	13.35	Short-Term Debt
% 6E'6Þ	% 12 SÞ	% 6E ZÞ	% Z6 ⁻ SS	% 05 FS	% 68.8h	Long-Term Debt
70 CC CF	70 ZO 31	70 OU 01	W 60 33	05 15		Cleco Consoration
% <u>00 00 l</u>	% <u>00 001</u>	% <u>00.001</u>	% <u>00 00 t</u>	% <u>00 001</u>	% <u>00.001</u>	Total Capital
82.64	20.12	79 09	20.12	<u> 78.84</u>	ZZ SÞ	Common Equity
0.95	80.1	40.1	86.0	28.0	18.0	Preferred Stock
00.0	00.0	00.00	00.0	00.0	00.0	Minority Interest
97.4	4.52	6.75	3.85	3.59	11.3	Short-Term Debt
% 00.2b	43 33 %	% 19°11	% S0.24	% 69 [.] 91 ⁷	% 9E 8Þ	California Water Service Group Long-Yern Debt
						California Water Service Group
% 00.001	% 00 001	% <u>00.001</u>	% 00 001	% 00 001	% <u>00.001</u>	Total Capital
76 9₽	7 <u>7715</u>	78 33	SP SP	<u>₹2.34</u>	<u>42.70</u>	Common Equity
99'0	17.0	t9'0	95.0	94.0	0,40	Preferred Stock
0.00	00.0	00'0	00.0	00.0	00.0	Minority Interest
9E.8	Z8.8	12.05	10.8	08.01	72.A	Short-Term Debt
% p1.pp	% 02.9c	% 8E.8E	% 86.74	45.50 %	% E9 Z9	Long-Term Debt
20 11 11	A 00 00	70 CC CC	A 60 2F	14 03 OF	A 65 63	American States Water Co.
						_
% 00 001	% 00 00 l	% <u>00.001</u>	% <u>00.00</u> 1	% <u>00.001</u>	% <u>00 00 l</u>	Total Capital
45.12	<u>64.54</u>	\$9`77	<u> 45.74</u>	45.93	32.21	Common Equity
Z9 [*] 0	3.11	0.00	00.0	0.00	00.00	Preferred Stock
00.0	00.00	00.0	0.00	00.00	00.0	Minority Interest
₽ €'9	2:06	5.22	11.0	91.6	14.55	Short-Term Debt
% 16:09	% ÞE 15	% EL 05	% SS 7S	% 1E.74	83.24 %	Long-Term Debt
						AGL Resources, Inc.
700077	IPAT	<u>8661</u>	8881	<u>0007</u>	<u> 2001</u>	
30ASTAVA	7661	8001	6661	0006	MOC	
5 YEAR						

Capital Structure Based upon Total Capital for the Proxy Group of Thirteen Utilities Selected on the Basis of Least Relative Distance for the Years 1997 through 2001

	2001	2000	1999	1998	1997	5 YEAR
	2001	<u>2000</u>	1999	1990	1997	<u>AVERAGE</u>
Philadelphia Suburban Corp.						
Long-Term Debt	47.67 %	48.18 %	47.44 %	52.40 %	52.88 %	49.71 %
Short-Term Debt	9.83	8.85	11.48	1.05	2.34	6.71
Minority Interest	0,07	0.28	0.29	0.00	0.00	0.13
Preferred Stock	0.10	0.17	0.19	0.64	1.67	0.55
Common Equity	42.33	<u>42.52</u>	<u>40.60</u>	<u>45.91</u>	<u>43.11</u>	<u>42.89</u>
Total Capital	<u>100.00</u> %	<u>100.00</u> %	100.00 %	100.00 %	100.00 %	<u>100.00</u> %
B. 1. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5.						
Public Service Enterprise Group, Inc.	68.70 %	AD DO W	52.14 %	49.78 %	45.83 %	53.26 %
Long-Term Debt	7.54	49.83 % 20.53	15.38	49.76 % 8.39	45.65 % 11.49	12.67
Short-Term Debt	7.54 0.00	20.53 0.00	0.00	0.00	0.00	0.00
Minority Interest	0.45	1.21	1.32	1.35	1.35	1.14
Preferred Stock	23.31	28.43	31.16	40.48	41,33	32.94
Common Equity Total Capital	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100,00 %
готан Сарпан	100.00 %	<u>100.00</u> %	100.00	100.00	100.00 %	100.00 %
Southern Company						
Long-Term Debt	51.76 %	44.36 %	50.76 %	53.09 %	50.32 %	50.06 %
Short-Term Debt	8.95	7.34	13,56	6.84	8.11	8.96
Minority Interest	0.00	0.00	2.51	2.00	1.71	1.24
Preferred Stock	1.73	1.61	1.28	1.38	1.94	1.59
Common Equity	<u>37.56</u>	<u>46.69</u>	<u>31.89</u>	<u>36.69</u>	<u>37.92</u>	<u>38.15</u>
Total Capital	<u>100.00</u> %	<u>100.00</u> %	<u>100.00</u> %	<u>100.00</u> %	<u>100.00</u> %	<u>100.00</u> %
TECO Energy, Inc.						
Long-Term Debt	52.03 %	40.02 %	37.93 %	41.87 %	36.61 %	41.69 %
Short-Term Debt	11.74	26.70	22.63	10.15	14.99	17.24
Minority Interest	0.00	0.00	0.00	0.00	0.00	0.00
Preferred Stock	0.00	0.00	0.00	0.00	0.00	0.00
Common Equity	36.23	33.28	39.44	47,98	48.40	41.07
Total Capital	<u>100.00</u> %	100.00 %	100.00 %	100.00 %	190.00 %	100.00 %
1100 D						
WPS Resources Corporation	F0.04.0/		45.45.44	20.52.86	25.00.00	44.50.00
Long-Term Debt	50.64 %	49.82 %	48.40 %	38.52 %	35.20 %	44.52 %
Short-Term Debt	2.81	8,99	6.87	5.90 0.00	3.55	5.62
Minority Interest	0.00	0.00	0.00 3.90	5.01	0.00	0.00 4,30
Preferred Stock	3.10 <u>43.45</u>	3.55	40,83	50.57	5.93 <u>\$</u> 5.32	4,50 45,56
Common Equity		37.64		100.00 %		100.00 %
Total Capital	<u>100.00</u> %	<u>100.00</u> %	<u>100.00</u> %	100.00 %	<u>100.00</u> %	100.00 %
York Water Company						
Long-Term Debt	46.35 %	48.29 %	50.41 %	51.30 %	\$1.62 %	49.59 %
Short-Term Debt	2.83	3.90	2.20	0.00	1.36	2.06
Minority Interest	0.00	0.00	0.00	0.00	0.00	0.00
Preferred Stock	0.00	0.00	0.00	0.00	0.00	0.00
Common Equity	<u>50.82</u>	<u>47.81</u>	<u>47.39</u>	<u>48.70</u>	47.02	<u>48.35</u>
Total Capital	<u>100.00</u> %	<u>100.00</u> %	<u>100.00</u> %	<u>100.00</u> %	<u>100.00</u> %	<u>100.00</u> %
December 1 Millian						
Proxy Group of Thirteen Utilities Selected on the Basis of			•			
Least Relative Distance	52.65 %	49.02 %	48.13 %	45.53 %	44.82 %	48.03 %
Long-Term Debt Short-Term Debt	32.63 % 7.64	49.02 % 9.05	48.13 % 8.06	6.25	5,93	7.39
	0.00		0.00	0.29	0.13	0.13
Minority Interest Preferred Stock	1.08	0.02 1.22	1.27	1.55	2.14	1.45
Common Equity	38.63	1.22 40.69	42.32	46.38	2.14 46,98	43.00
Total Capital	30.03 100.00 %	100.00 %	42.32 100.00 %	100.00 %	100.00 %	100.00 %
i otai Gapitai	100,00	100.00 70	100.00 W	100.00	<u>-100.00</u> 78	1777777 V

Source of Information: Standard & Poor's Compustat Services, Inc., PC Plus Research Insight Data Base

Basis for the Selection of the Proxy Group of Fourteen Utilities Selected on the Basis of Least Relative Distance

	Pre-Tax interest Coverage (1)	Common Equity Ratio (2)	Fixed Asset Turnover (3)	AFUDC to Net Income (4)	Cash Flow as a % of Permanent Capitalization (5)	Net Cash Flow to Expenditures (6)	Funds Flow Interest Coverage (7)	Operating Earnings Stability (8)	Sum of Distance (9)
AGL Resources, Inc.	2.9459	0.4538	0.3549	0.0000	0.1123	0.6823	3.6973	0.2885	0.4555
American States Water Co.	3.2962	0.4834	0.2761	0.0000	0, 1 010	0.5295	3.6979	0.3484	0.6372
California Water Service Group	2.9129	0.5081	0.2796	0.0366	0.0950	0.4430	3.3723	0,4428	0.3530
Cleco Corporation	3.27 06	0.4222	0.4814	0.0171	0.1072	0.9774	3.9565	0.4265	0.9644
DPL Inc.	3.2433	0.3477	0.3345	0.0000	0.1113	0.8663	3.2305	0.2093	0.6035
Middlesex Water Company	2.8516	0.4464	0.2459	0.0752	0.0649	0.2797	3.1098	0.2470	0.4069
Northwest Natural Gas Co,	3,1368	0.5133	0.3881	0.0212	0.1023	0.7051	3.7558	0.8167	0.8852
Philadelphia Suburban Corp.	3.1666	0.4723	0.1824	0,0000	0.0984	0.5033	3.3416	0.1780	0.3685
Public Service Enterprise Group, Inc.	2.4041	0,3538	0.6046	0.0000	0.0999	0.8495	2.8618	0.1553	0.8476
Southern Company	3,0793	0.4350	0.2821	0.0357	0.1170	0,6745	3.7839	0.4296	0.6046
TECO Energy, Inc.	2,7763	0.5067	0.3426	0.0164	0.1245	0,4157	3.8205	0,1938	0.5144
WPS Resources Corporation	2,5929	0.4395	0.7740	0.0425	0.1020	0.4827	3.7452	0,3625	0.7864
York Water Company	2.9469	0.5020	0.1599	0.0257	0.0804	0.3457	2.8569	0.1678	0,5658
Consumers Illinois Water Company	2.8082	0.5141	0.1676	0,0322	0.0892	0.5559	3.3628	0.1459	0.0000

See page 6 for notes.

Basis for the Selection of the Proxy Group of Thirteen Utilities Selected on the Basis of Least Relative Distance

Notes:

- (1) Pre-tax interest coverage represents the number of times available earnings, before income taxes, excluding all allowance for funds used during construction (AFUDC) cover total interest charges, average for the years 1999, 2000 and 2001.
- (2) Common equity ratio is the ratio of total common equity to permanent capitalization (the sum of total long-term debt, current maturities, total preferred stock and total common equity), average for the years 1999, 2000 and 2001.
- (3) Fixed asset turnover is the ratio of total operating revenues to gross utility plant, average for the years 1999, 2000 and 2001.
- (4) AFUDC to net income is the ratio of total AFUDC to income available for common equity, average for the years 1999, 2000 and 2001.
- (5) Cash flow as a percent of permanent capitalization is the ratio of funds from operations (sum of net income, depreciation, amortization, net deferred income tax and investment tax credits, less total AFUDC) to permanent capitalization (the sum of total long-term debt, current maturities, total preferred stock and total common equity), average for the years 1999, 2000 and 2001.
- (6) Net cash flow to capital expenditures is the ratio of gross construction expenditures, excluding all AFUDC, provided by funds from operation (as defined in Note 5), after payment of all cash dividends, average for the years 1999, 2000 and 2001.
- (7) Funds flow interest coverage is the ratio of funds from operations (as defined in Note 5) plus total interest charges to total interest charges, average for the years 1999, 2000 and 2001.
- (8) Operating earnings stability is an index of the variation in quarterly before-income tax operating income for the years 1999, 2000 and 2001. It is calculated by dividing the standard error of the estimate of a regression about a trend line by the mean. It is analogous to the coefficient of variation.
- (9) Sum of distance is calculated as the squared distances between the eight operating / financial ratios of each firm and Consumers Illinois Water Company, summing the squared distances, and then calculating the square root of the summation.

Source of Information:

Standard & Poor's Compustat Services, Inc., PC Plus Research Insight Database

Consumers Illinois Water Company audited financial statements and quarterly income statements

Consumers Illinois Water Company Hypothetical Example of the Inadequacy of A DCF Return Rate Related to Book Value When Market Value is Greater / Less than Book Value

1

Line No.	lo. Market Value		rket Value_	Book Value with Market to Book Ratio of 180%		Book Value with Market to Book Ratio of 80%	
1.	Per Share	\$	24.000	\$	13.33	\$	30.00
2.	DCF Cost Rate (1)		10.00%		10.00%		10.00%
3.	Return in Dollars	\$	2.400	\$	1.333	\$	3.000
4.	Dividends (2)	\$	0.960	\$	0.960	\$	0.960
5 .	Growth in Dollars	\$	1.440	\$	0,373	\$	2.040
6.	Return on Market Value		10.00%		5.55% (3)		12.50% (4)
7.	Rate of Growth on Market Value		6.00% (5)		1.55% (6)		8.50% (7)

- Notes: (1) Comprised of 4.0% dividend yield and 6.0%% growth.
 - (2) \$24.00 * 4.0% yield = \$0.960.
 - (3) \$1.333 / \$24.00 market value = 5.55%.
 - (4) \$3.000 / \$24.00 market value = 12.50%.
 - (5) Expected rate of growth per market based DCF model.
 - (6) Actual rate of growth when DCF cost rate is applied to book value (\$1.333 possible earnings \$0.960 dividends = \$0.373 for growth / \$24.00 market value = 1.55%).
 - (7) Actual rate of growth when DCF cost rate is applied to book value (\$3,000 possible earnings \$0,960 dividends = \$2.040 for growth / \$24.00 market value = 8.50%).

Consumers Illinois Water Company Indicated Common Equity Cost Rate Through Use of the Discounted Cash Flow Model Summary of Conclusion

	Proxy Group of Seven C. A. Turner Water Companies	Proxy Group of Thirteen Utilities Selected on the Basis of Least Relative
Single Stage Discounted Cash Flow Model (1)	9.9 %	10.6 %
Quarterly Version of the Discounted Cash Flow Model (2)	10.2	10.5
3. Conclusion	<u>10.1</u> %	10.6 %

Notes:

- (1) From Schedule 8 of this Exhibit.
- (2) From page 2 of Schedule 9 of this Exhibit.

Consumers Illinois Water Company Indicated Common Equity Cost Rate Through Use of the Single-Stage Discounted Cash Flow Model Summary of Conclusion

Proxy Group of Seven					
C. A. Turner Water					
Companies					

Proxy Group of Thirteen Utilities Selected on the Basis of Least Relative Distance

Based upon Historical and Projected Growth in DPS, EPS, and BR+SV

1. Dividend Yield (1)	3.3 %	5.1 %
2. Dividend Growth Component (2)	0.1	0.1
3. Yield	3.4	5.2
4. Growth Rate (3)	5.7	4.6
5. Indicated Return Rate	<u>9.1</u> %	9.8 %
	Based upon Projected Growth in EPS	
6. Dividend Yield (1)	3.3 %	5.1 %
7. Dividend Growth Component (2)	0.1	0.2
8. Yield	3.4	5.3
9. Growth Rate (3)	7.2	6.1
10. Indicated Return Rate	<u>10.6</u> %	<u>11.4</u> %
11. Conclusion	9.9 %	<u>10.6</u> %

Notes:

- (1) From Schedule 10 of this Exhibit.
- (2) This reflects a growth rate component equal to one-half the conclusion of growth rate (from page 1 of Schedule 12 of this Exhibit) x Line Nos. 1 and 6 to reflect the periodic payment of dividends (Gordon Model) as opposed to the continuous payment. Thus, 3.3% x (1/2 x 5.7%) = 0.1%.
- (3) Conclusion of growth from page 1 of Schedule 12 of this Exhibit.